

The opinion in support of the decision being entered today
was **not** written for publication and
is **not** binding precedent of the Board.

Paper No. 25

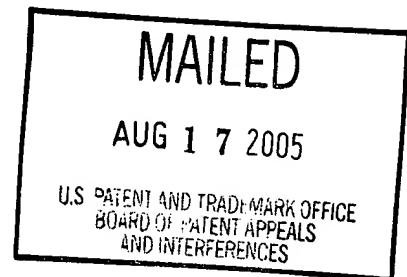
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAY H. CONNELLY

Appeal No. 2005-1081
Application No. 09/216,457

ON BRIEF



Before: LEVY, MACDONALD and NAPPI, **Administrative Patent Judges.**

NAPPI, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 of the final rejection of claims 3, 4, 8 through 13, 15, 16, 19, and 21 through 49. For the reasons stated *infra* we affirm-in-part the examiner's rejection of these claims.

Invention

The invention relates to a method and apparatus to develop a speech menu for a plurality of speech enabled applications (SEAs) or devices. A first sound command of a plurality of sound commands from one SEA is compared to a second sound command to determine an accuracy value. If the accuracy value is less than a predetermined value then one of the sound commands is replaced with another sound command. See page 3 of appellant's specification. Thus, a device with diverse independent SEAs is enabled to share a common speech menu by reducing the number of similar commands.

Claim 37 is representative of the invention and is reproduced below:

37. A method for building a speech menu from separate pre-existing speech menus, comprising:

determining a similarity of at least two predetermined and pre-trained audio commands from the pre-existing speech menus by comparing each audio command to the others, to determine an accuracy value; and

combining each of the at least two audio commands in a final speech menu, wherein the accuracy value for each audio command is greater than or equal to a predetermined value.

References

Lasar	4,275,266	June 23, 1981
Diehl et al. (Diehl)	6,052,666	April 18, 2000 (filed October 9, 1996)
Meunier et al. (Meunier)	6,134,527	October 17, 2000 (filed January 30, 1998)

Rejection at Issue

Claims 3, 4, 8 through 11, 13, 15, 16, 21 through 23, 25 through 29, and 31 through 49 stand rejected under 35 U.S.C. § 103 being obvious over Meunier in view of Diehl. The examiner's rejection is set forth on pages 3 through 21 of the answer. Claims 12, 19, 24 and 30 stand rejected under 35 U.S.C. § 103 being obvious over Meunier in view of Diehl and Lasar. The examiner's rejection is set forth on page 21 of the answer.

Opinion

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the briefs along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

With full consideration being given to the subject matter on appeal, the examiner's rejections and the arguments of appellant and the examiner, and for the reasons stated *infra* we sustain the examiner's rejections of claims 8 through 12, 21 through 36 under 35 U.S.C. § 103. However, we will not sustain the examiner's rejection of claims 3, 4, 13, 15, 16, 19, and 37 through 49 under 35 U.S.C. § 103.

Grouping of the claims.

At the outset, we note that appellant states, on pages 4 and 5 of the brief, that:

Claims 8-12 and 32-34; and 43-46 are directed to a speech-enabled apparatuses for developing a speech menu to control at least two speech-enabled applications,

Claims 13-16 and 19; and 47-48 are directed to a set of instructions residing in a storage medium.

Claims 21-25 and 3-4; and 26-31 are directed to a method of building a speech menu to control at least two devices.

Claims 35-36; and 49 are directed to a computer data signal embodied in a carrier wave to develop a speech menu for a speech-enabled application.

Claims 37-42 are directed to a method for building a speech menu from separate pre-existing speech menus.

A separate basis for patentability exists for each group of claims.

However, except to the extent otherwise indicated below, the respective groups of claims do not stand or fall together for purposes of appeal.

37 C.F.R. § 1.192(c) (7) (July 1, 2003) as amended at 62 Fed. Reg. 53196 (October 10, 1997), which was controlling at the time of appellant filing the brief, states:

For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together and in the argument under paragraph (c) (8) of this section appellant explains why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.

The above noted statement merely points out the differences in what the claims cover and are not considered to be arguments as to why the claims are separately patentable. On pages 7 and 8 of the brief appellant presents arguments as to why the claims are patentable, in these arguments appellant applies the same reasoning for claims 8 through 11, 21 through 23, 25 through 29, 31 through 36. Similarly, on page 9 of the brief, appellant presents further arguments as to why the claims are patentable, in these arguments appellant applies the same reasoning for claims 13 through 16 and 37 through 49. As claims 12, 19, 24 and 30 are included in a different rejection, we will group them separately and we consider the claims in three groups. Group A consisting of claims 8 through 11, 21 through 23, 25 through 29, 31 through 36 and we will treat claim 8 as a representative claim. Group B consisting of claims 13 through 16 and 37 through 49, and we will treat claim 13 as a representative claim. Group C, consisting of claims 12, 19, 24 and 30.

Rejection of claims in group A (claims 8 through 11, 21 through 23, 25 through 29, 31 through 36).

Appellant argues, on page 5 of the brief, that there is no motivation to combine *Meunier* and *Diehl*. On page 6 of the brief, appellant asserts that the motivation asserted by the examiner is insufficient. Appellant argues:

There is no suggestion within *Meunier* of developing a speech menu for *multiple devices*, applications, or predetermined audio commands. Similarly, *Diehl* does not enable control of multiple speech applications in the same way as claimed by the present invention. In *Diehl*, there is

absolutely no teaching or suggestion of developing a *speech menu* to control multiple devices. (emphasis original)

Further, appellant argues “these two references solve entirely different problems (training vs. operation) and there is no reason why one of ordinary skill in the art would be motivated to combine them to achieve the claimed invention.”

In response, the examiner asserts, on page 22 of the answer: “Diehl specifically discloses that because most consumers have a plurality of different devices that can be controllable, it would enhance user-friendliness to provide for vocal control of a plurality of devices via one central system (col. 1, lines 14-44).”

We concur with the examiner. Our reviewing court stated in **Lee**, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433, that when making an obviousness rejection based on combination, “there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by Applicant” (quoting **In re Dance**, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998)). “The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved.” **In re Huston** 308 F.3d 1267, 1278, 64 USPQ2d 1801, 1810 (Fed. Cir. 2002, citing **In re Kotzab** 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000).

We find, as the examiner asserts, that Diehl teaches a system where a plurality of devices are connected by a bus to a central authority, and the central authority performs speech recognition. The central authority collects user requests and issues commands to the various devices. (See column 2, lines 31-

41). We find that implicit in this teaching is that the central authority contains a correlation of user requests to device commands. We find that Diehl teaches that existing speech recognition solutions can be used. (See column 2, lines 46-49). As an enhancement to the existing speech recognition solutions, Diehl teaches if there is ambiguity as to which device the user's command is directed to, the user is prompted to clarify the command. (See column 2 lines 55-67, see also figure 1, steps 2 and 4). Diehl teaches that the reason for using speech recognition for the various devices is to enhance the user-friendliness of the interface with the devices. Thus, we find that the nature of the problem to be solved by Diehl is to enhance the user interface with a group of consumer devices.

We find that Meunier teaches a speech recognition system where a new utterance (user speech command) is compared to existing commands to determine if there is similarity between the commands and if the similarity will create confusion. (See column 2, lines 46-54). Based upon the determination of similarity, the model of the utterance is either accepted and stored or discarded. (See column 4, lines 38-45). Further, we find that Meunier teaches that the device may have multiple applications in which speech recognition is used. (See column 1, lines 15-21, which describe speech recognition used for calling frequently called people, or utilizing features such as messages). Additionally, we note that though Meunier's primary embodiment is directed to radiotelephones, Meunier teaches that the invention can be "applied to any device employing speech recognition." (See column 6, lines 64-65).

Thus, we find that the nature of the problem to be solved by Diehl, to enhance the user interface of a group of consumer devices by using existing speech recognition solutions, augmented by a user prompt to resolve ambiguities, provides suggestion to look to other speech recognition systems, such as Diehl's system. Further, we find that Diehl's disclosure of applying the speech recognition systems to any device employing speech recognition provides suggestion that the device can be used with systems such as Diehl. Accordingly, we find ample suggestion to combine the references as asserted by the examiner in the rejection under 35 U.S.C. § 103.

Appellant argues, on page 6 of the brief, "Meunier and Diehl, even if considered in combination, do not teach or suggest comparison of speech commands from *multiple applications*" (emphasis original). On page 7 of the brief, appellant asserts:

Meunier does not teach comparison of candidate commands from *multiple applications*. Meunier, in fact, makes no reference to applications whatsoever. It certainly does not disclose comparing candidate commands from multiple applications to previously-stored sound commands and installing them on the basis of an accuracy value calculation.

Furthermore, the addition of Diehl does not supply the missing elements. Diehl does not teach or suggest the claimed apparatus for developing a speech menu from more than one application. ... Instead of creating a consolidated speech menu to avoid unnecessarily confusing input, Diehl propose to prompt an operator to enter whatever spoken commands are most natural for him/her and if the command ambiguously identifies the target device, Diehl's system queries the operator for more information. See, figure 1. Far from rendering the claimed invention obvious, Diehl actually teaches away from the subject matter of claim 8.

On page 1 of the reply brief, appellant clarifies this argument, stating “the prior art does not teach or suggest comparing candidate sound commands from multiple applications to a previously-stored sound command, and installing the sound commands of each application unless an accuracy value determined therefrom is less than a predetermined value.” Further, appellant asserts that “devices are different from applications” and on page 3 of the reply brief appellant asserts that Meunier does not control devices or speech-enabled software applications and that “Meunier provides nothing to help Diehl control software applications.”

In response, on page 23 of the answer, the examiner states:

The Examiner disagrees, and argues that Meunier specifically discloses a method of testing a new vocabulary word being enrolled for acoustic similarity with existing vocabulary words in a speech recognition system (col. 3, lines 3-5), which reads on “comparing at least one candidate sound command to a previously stored sound command in the speech menu”. The acoustic similarity is determined by calculating a metric for each model and comparing the metric to a predetermined threshold (col. 4, lines 47 continuing to col. 5, lines 12), which reads on “determining an accuracy value, . . . is less than a predetermined value.” Meunier disclose that the system can be used on any device employing speech recognition (col. 6, lines 62-67). Diehl (abstract; fig 2) discloses a speech based man-machine communication system comprising more than one controllable device (and by implication more than one application).

We concur with the examiner and are not convinced by appellant’s arguments. Claim 8 contains the limitations “Speech-enabled apparatus for developing a speech menu to control at least two speech-enabled applications” “a distance accuracy module capable of comparing at least one candidate sound command from each application to a previously-stored sound command in the speech menu.” Thus, the scope of claim 8 includes that there are two speech-

controlled applications on one device and that a comparison between candidate sound commands and previously stored commands is made for the sound commands of the applications. We note that claim 8, and the claims dependent thereon are the only claims, in group A that include the limitations of a speech-enabled application, the remainder of the claims discuss devices.

As stated *supra* we find that Meunier and Diehl provide sufficient motivation to be combined as asserted by the examiner. We concur with the examiner that in combination the references teaches using Meunier's system to prevent similar sounding speech commands from being entered into the speech menu of a device which controls multiple devices. As stated *supra* we also find that Meunier does teach that the speech commands can be for different applications. We disagree with the appellant that "Meunier does not control devices or speech-enabled software applications." Initially, we note that claim 8 does not contain a limitation of "software applications." Further, Meunier's disclosure is directed to a speech recognition system for use on a radiotelephone which has applications, clearly teaching control of a device and applications. Additionally, as stated *supra* Meunier contemplates use of the system on a computer, which by implication means that Meunier's system controls software applications.

We disagree with the appellant that Diehl teaches away from the claimed invention. Our reviewing court has said "[A] reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be

discouraged from following the path set out in the reference, or would be lead in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant." *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994) (*citing United States V. Adams*, 383 U.S. 39, 52, 148 USPQ 478, 484 (1966)). However, a reference that "teaches away" does not *pre se* preclude a *prima facie* case of obviousness, but rather the "teaching away" of the reference is a factor to be considered in determining unobviousness. *Id* 27 F.3d at 552, 31 USPQ 2d at 1132. Initially we note that the examiner relies upon Diehl to teach that it is known to use one speech enabled device to operate multiple speech enabled devices and that Diehl's teaching of querying the user if an ambiguous command is received is not relied upon the rejection. Nonetheless, we do not find any disclosure in Diehl which would suggest to one of ordinary skill in the art that Diehl's teaching could not be used with a system such Meunier's which during set up of the speech commands prevents similar sounding speech commands from being entered into the speech menu. To the contrary, we find that the two system are complementary, in that when combined they work to resolve ambiguities at different stages of the usage of the speech-enabled device, training and operation, i.e. the speech commands in the menu should not be similar sounding as ambiguities should be resolved in training, however, if

there is an ambiguity in received speech command issued by the user, the user will be queried.

For the forgoing reasons we will sustain the examiner's rejection of representative claim 8 and the claims grouped in group A, claims 8 through 11, 21 through 23, 25 through 29, 31 through 36.

Rejection of claims in group B (claims 13 through 16 and 37 through 49)

Appellant argues, on page 9 of the brief, that claim 13 calls for "comparing candidate sound commands from at least two device predetermined tables to previously-stored sound commands to determine an accuracy value therebetween" and that Meunier and Diehl do not teach or suggest this subject matter. Appellant asserts: "In Meunier's system, each vocabulary word is entered through an enrollment procedure involving either a plurality of spoken commands from an individual user or a database of multiple repetitions of the same word" and that Diehl teaches determining which device is being addressed by a command. Thus, appellant concludes that the disclosures do not teach, "at least two device predetermined tables" as claimed in claim 13.

In response, on page 25 of the answer, the examiner states:

The Examiner disagrees and argues that predetermined commands are inherent from the controlling of the devices. The devices are controlled via a specific set of commands and these commands are predetermined. Thus, by allowing the user to control multiple devices via commands specifically associated with the devices, as taught by Diehl, and comparing the commands associated with the devices to commands and vocabulary existing in the system to determine if the device commands are acoustically similar with existing commands or vocabulary, as taught by

Meunier, the combination of Meunier and Diehl teach and or suggest comparison of predetermined speech commands.

We concur with the appellant. Claim 13 includes the limitation “comparing candidate sound commands from at least two device predetermined tables to previously-stored sound commands.” Independent claims 37 and 43 include the limitation “determining the similarity of at least two pre-trained audio commands, each pre-trained audio command being selected from a pre-existing speech menu.” Independent claim 47 contains a similar limitation. Independent claim 49 includes the “comparing at least two pre-trained audio commands from pre-existing speech menus.” Thus, we find that the scope of independent claims 13, 37, 43, 47 and 49 includes that there are two tables or menus of sound commands, which are preexisting, or pre-trained, that are compared to create a speech menu.

While we concur with the examiner that inherently the set of commands for a device are predetermined, however we do not find that the set of sounds (or speech commands) to execute the commands are inherently predetermined. As in the system of Meunier, the speech commands associated with device commands may also be programmed by the user. We find no teaching in Diehl that there is a set of at least two device predetermined sound commands. Similarly, we do not find that Meunier teaches that the candidate commands come from at least two device predetermined commands tables, rather we find that Meunier teaches that the candidate commands are entered, trained, by the user and then used in a comparison. Accordingly we will not sustain the

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examiner's rejection of the claims grouped in group B ,claims 13 through 16 and 37 through 49.

Rejection of claims in group C, (claims 12, 19, 24 and 30)

Appellant argues, on pages 9 and 10 of the brief:

In rejecting these dependent claims, the Examiner cited Meunier in view of Diehl and further in view of Lasar. However, while Lasar discloses a device that takes musical tones and converts them to digital signals/ numbers, which can then be used to control a given device, it does not disclose any of the missing elements from the independent claims or motivation to combine the references discussed above.

As discussed above, we find that the combination of Meunier and Diehl in combination make obvious the subject matter of independent claims 8, 21 and 26. Claims 12, 24 and 30 depend upon claims 8, 21 and 26 respectively. As appellant's arguments have not identified any deficiency of the rejection of claims 12, 24 and 30 beyond what was already discussed *supra* with respect to independent claims 8, 21 and 26, we will sustain the examiner's rejection.

However, claim 19 depends upon, independent claim 13, as stated *supra* we do not find that the combination of Meunier and Diehl make obvious claim 13. We do not find that Lasar makes up for the above noted deficiencies in the rejection. Accordingly, we will not sustain the examiner's rejection of claim 19.

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Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief or by filing a reply brief have not been considered and are deemed waived by appellant (see 37 CFR § 41.37(c)(vii)). Support for this rule has been demonstrated by our reviewing court in *In re Berger* 279 F.3d 975, 984, 61 USPQ2d 1523, 1528-1529 (Fed. Cir. 2002) wherein the Federal Circuit Court stated that because the appellant did not contest the merits of the rejections in his brief to the Federal Circuit Court, the issue is waived. **See also** *In re Watts* 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1458 (Fed. Cir. 2004).

In summary, we sustain the examiner's rejections of claims 8 through 12, 21 through 36 under 35 U.S.C. § 103. However, we will not sustain the examiner's rejection of claims 3, 4, 13, 15, 16, 19, and 37 through 49 under 35 U.S.C. § 103.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

Stuart S. Levy
STUART S. LEVY

STUART S. LEVY
Administrative Patent Judge

Administrative Patent Judge

Allen D. MacDonell

ALLEN D. MACDONELL

ALLEN R. MACDONALD
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